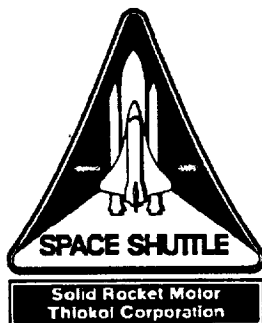


TWR-60699



Appendix B Case, Seals, and Joints PFORs

Final Postflight Hardware Evaluation Report 360T025 (RSRM-25, STS-46)

March 1993

Prepared for:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
MARSHALL SPACE FLIGHT CENTER, ALABAMA 35812

Contract No.	NAS8-38100
DR No.	4-23
WBS No.	4C601-04-01
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Thiokol CORPORATION
SPACE OPERATIONS

P.O. Box 707, Brigham City, Utah 84302-0707 (801) 863-3511

(NASA-CR-192564) POSTFLIGHT
HARDWARE EVALUATION 360T025
(RSRM-25, STS-46). APPENDIX B:
CASE, SEALS, AND JOINTS PFORs Final
Report (Thiokol Corp.) 93 p

N93-30619

Unclass

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CASE, SEALS, AND JOINTS REQUIRED PFOR LIST

<u>PFOR #</u>	<u>Title</u>	<u>Side</u>	<u>Joint or Location</u>	<u>Final Report Page Number</u>
B-2	S&A Device (Barrier-Booster and Environmental Seal Region) Condition	Left	S&A	B-1
B-7	S&A Rotor Shaft O-ring Condition (Detailed)	Left	S&A	B-2
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	S&A 126°	B-3
B-4	Leak Check Plug/SII Condition (Detailed)	Left	S&A 126°	B-4
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	S&A 126°	B-5
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	S&A 306°	B-6
B-4	Leak Check Plug/SII Condition (Detailed)	Left	S&A 306°	B-7
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	S&A 306°	B-8
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	18° SII	B-9
B-4	Leak Check Plug/SII Condition (Detailed)	Left	18° SII	B-10
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	18° SII	B-11
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	198° SII	B-12
B-4	Leak Check Plug/SII Condition (Detailed)	Left	198° SII	B-13
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	198° SII	B-14

(Note: Clarification forms will be inserted after the required PFOR in the Final Report. The clarification form page number will be the same as the required PFOR Final Report page number appended by a sequential alphabetic extension.)

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CASE, SEALS, AND JOINTS REQUIRED LIST (Cont.)

<u>PFOR #</u>	<u>Title</u>	<u>Side</u>	<u>Joint or Location</u>	<u>Final Report Page Number</u>
B-3	Internal Nozzle Joint Condition	Left	Nozzle Joint #2	B-15
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Left	Nozzle Joint #2	B-16
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	Nozzle Joint #2	B-17
B-4	Leak Check Plug/SII Condition (Detailed)	Left	Nozzle Joint #2	B-18
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	Nozzle Joint #2	B-19
B-3	Internal Nozzle Joint Condition	Left	Nozzle Joint #3	B-20
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Left	Nozzle Joint #3	B-21
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	Nozzle Joint #3	B-22
B-4	Leak Check Plug/SII Condition (Detailed)	Left	Nozzle Joint #3	B-23
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	Nozzle Joint #3	B-24
B-3	Internal Nozzle Joint Condition	Left	Nozzle Joint #4	B-25
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Left	Nozzle Joint #4	B-26
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	Nozzle Joint #4	B-27
B-4	Leak Check Plug/SII Condition (Detailed)	Left	Nozzle Joint #4	B-28
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	Nozzle Joint #4	B-29

(Note: Clarification forms will be inserted after the required PFOR in the Final Report. The clarification form page number will be the same as the required PFOR Final Report page number appended by a sequential alphabetic extension.)

CASE, SEALS, AND JOINTS REQUIRED LIST (Cont.)

<u>PFOR #</u>	<u>Title</u>	<u>Side</u>	<u>Joint or Location</u>	<u>Final Report Page Number</u>
B-3	Internal Nozzle Joint Condition	Left	Nozzle Joint #5	B-30
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Left	Nozzle Joint #5	B-31
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Left	Nozzle Joint #5	B-32
B-4	Leak Check Plug/SII Condition (Detailed)	Left	Nozzle Joint #5	B-33
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Left	Nozzle Joint #5	B-34
B-8	Packing With Retainer Condition (Detailed)	Left	Nozzle Fixed Housing	B-35
B-9	Case Factory Joint Condition	Left	Forward Dome	B-36
B-9	Case Factory Joint Condition	Left	Forward	B-37
B-9	Case Factory Joint Condition	Left	Forward Center	B-38
B-9	Case Factory Joint Condition	Left	Aft Center	B-39
B-9	Case Factory Joint Condition	Left	ET Attach/ Stiffener	B-40
B-9	Case Factory Joint Condition	Left	Stiffener/ Stiffener	B-41
B-9	Case Factory Joint Condition	Left	Aft Dome	B-42

(Note: Clarification forms will be inserted after the required PFOR in the Final Report. The clarification form page number will be the same as the required PFOR Final Report page number appended by a sequential alphabetic extension.)

CASE, SEALS, AND JOINTS REQUIRED LIST (Cont.)

<u>PFOR #</u>	<u>Title</u>	<u>Side</u>	<u>Joint or Location</u>	<u>Final Report Page Number</u>
B-2	S&A Device (Barrier-Booster and Environmental Seal Region) Condition	Right	S&A	B-43
B-7	S&A Rotor Shaft O-ring Condition (Detailed)	Right	S&A	B-44
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	S&A 126°	B-45
B-4	Leak Check Plug/SII Condition (Detailed)	Right	S&A 126°	B-46
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	S&A 126°	B-47
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	S&A 306°	B-48
B-4	Leak Check Plug/SII Condition (Detailed)	Right	S&A 306°	B-49
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	S&A 306°	B-50
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	18° SII	B-51
B-4	Leak Check Plug/SII Condition (Detailed)	Right	18° SII	B-52
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	18° SII	B-53
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	198° SII	B-54
B-4	Leak Check Plug/SII Condition (Detailed)	Right	198° SII	B-55
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	198° SII	B-56

(Note: Clarification forms will be inserted after the required PFOR in the Final Report. The clarification form page number will be the same as the required PFOR Final Report page number appended by a sequential alphabetic extension.)

CASE, SEALS, AND JOINTS REQUIRED LIST (Cont.)

<u>PFOR #</u>	<u>Title</u>	<u>Side</u>	<u>Joint or Location</u>	<u>Final Report Page Number</u>
B-3	Internal Nozzle Joint Condition	Right	Nozzle Joint #2	B-57
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Right	Nozzle Joint #2	B-58
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	Nozzle Joint #2	B-59
B-4	Leak Check Plug/SII Condition (Detailed)	Right	Nozzle Joint #2	B-60
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	Nozzle Joint #2	B-61
B-3	Internal Nozzle Joint Condition	Right	Nozzle Joint #3	B-62
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Right	Nozzle Joint #3	B-63
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	Nozzle Joint #3	B-64
B-4	Leak Check Plug/SII Condition (Detailed)	Right	Nozzle Joint #3	B-65
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	Nozzle Joint #3	B-66
B-3	Internal Nozzle Joint Condition	Right	Nozzle Joint #4	B-67
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Right	Nozzle Joint #4	B-68
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	Nozzle Joint #4	B-69
B-4	Leak Check Plug/SII Condition (Detailed)	Right	Nozzle Joint #4	B-70
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	Nozzle Joint #4	B-71

(Note: Clarification forms will be inserted after the required PFOR in the Final Report. The clarification form page number will be the same as the required PFOR Final Report page number appended by a sequential alphabetic extension.)

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CASE, SEALS, AND JOINTS REQUIRED LIST (Cont.)

<u>PFOR #</u>	<u>Title</u>	<u>Side</u>	<u>Joint or Location</u>	<u>Final Report Page Number</u>
B-3	Internal Nozzle Joint Condition	Right	Nozzle Joint #5	B-72
B-5	Large Diameter (Joint) O-ring Condition (Detailed)	Right	Nozzle Joint #5	B-73
B-1	Leak Check Plug/SII and Port Condition (At Removal)	Right	Nozzle Joint #5	B-74
B-4	Leak Check Plug/SII Condition (Detailed)	Right	Nozzle Joint #5	B-75
B-6	Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)	Right	Nozzle Joint #5	B-76
B-8	Packing With Retainer Condition (Detailed)	Right	Nozzle Fixed Housing	B-77
B-9	Case Factory Joint Condition	Right	Forward Dome	B-78
B-9	Case Factory Joint Condition	Right	Forward	B-79
B-9	Case Factory Joint Condition	Right	Forward Center	B-80
B-9	Case Factory Joint Condition	Right	Aft Center	B-81
B-9	Case Factory Joint Condition	Right	ET Attach/Stiffener	B-82
B-9	Case Factory Joint Condition	Right	Stiffener/Stiffener	B-83
B-9	Case Factory Joint Condition	Right	Aft Dome	B-84

(Note: Clarification forms will be inserted after the required PFOR in the Final Report. The clarification form page number will be the same as the required PFOR Final Report page number appended by a sequential alphabetic extension.)

POSTFLIGHT OBSERVATION RECORD (PFOR) B-2
S&A Device (Barrier-Booster and Environmental Seal Regions) Condition

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG, 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORGAN		

<u>Barrier-Booster Bore and Rotor Observations:</u>	Yes	No	Comment #
A. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-rings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
C. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Teflon Retainer Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Environmental Seal Region Observations:</u>	Yes	No	Comment #
J. Environmental O-ring Assembly Damage (Visible Without Magnification)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Special Issues 3.2.3.3 → NO CORROSION WAS OBSERVED ON ROTOR DETENT BALL SPRING.

1. TYPICAL SOOT OBSERVED UP TO, BUT NOT PAST, PRIMARY O-RING #1.

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-7
S&A Rotor Shaft O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORGAN		
Location: S&A Device Barrier-Booster Rotor Shaft		
<u>Forward Primary O-ring Observations:</u>	Yes	No
A. Heat Affected or Eroded O-ring?	_____	<input checked="" type="checkbox"/>
B. O-ring Defects/Damage?	_____	<input checked="" type="checkbox"/>
<u>Aft Primary O-ring Observations:</u>		
C. Heat Affected or Eroded O-ring?	_____	<input checked="" type="checkbox"/>
D. O-ring Defects/Damage?	_____	<input checked="" type="checkbox"/>
<u>Forward Secondary O-ring Observations:</u>		
E. Heat Affected or Eroded O-ring?	_____	<input checked="" type="checkbox"/>
F. O-ring Defects/Damage?	_____	<input checked="" type="checkbox"/>
<u>Aft Secondary O-ring Observations:</u>		
G. Heat Affected or Eroded O-ring?	_____	<input checked="" type="checkbox"/>
H. O-ring Defects/Damage?	_____	<input checked="" type="checkbox"/>

Notes / Comments

Preliminary PFAR(s)? _____ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No

Clarification Form Page No.(s): _____

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POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/Sil and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MOREAN		
Location: 126-Degree Barrier-Booster Bore		

<u>Leak Check Plug Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	_____	✓	_____
B. Soot To or Past O-ring?	_____	✓	_____
C. Foreign Material?	_____	✓	_____
D. O-ring Damage (In Groove)?	_____	✓	_____
E. Heat Affected or Eroded O-ring (In Groove)?	_____	✓	_____
F. Excessive or No Grease on O-ring?	_____	✓	_____
G. Excessive Grease on Plug?	_____	✓	_____
H. Corrosion?	_____	✓	_____
I. Thread Damage (Visible at Removal)?	_____	✓	_____

<u>Leak Check Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	_____	✓	_____
K. Foreign Material?	_____	✓	_____
L. Excessive Grease?	_____	✓	_____
M. Corrosion?	_____	✓	_____
N. Metal Damage?	_____	✓	_____
O. Heat Affected Metal?	_____	✓	_____
P. Obstructed Through Hole?	_____	✓	_____

Notes / Comments

Preliminary PFAR(s)? Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORGAN		
Location: 126-Degree Barrier-Booster Bore		
Secondary O-ring Observations:	Yes	No
A. Heat Affected or Eroded O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. O-ring Defects/Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notes / Comments		
<p>Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Preliminary PFAR Number(s): _____</p>		

Preliminary PFAR(s)? Yes ✓ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? Yes ✓ No

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MCREAN		
Location: 306-Degree Barrier-Booster Flange		

<u>Leak Check Plug Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Leak Check Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORGAN		
Location: 306-Degree Barrier-Booster Flange		
<u>Leak Check Plug Observations:</u>	Yes	No
A. Foreign Material Between the O-ring and Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Seal Surface/Thread Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comment #		
<div style="border: 1px solid black; height: 150px; margin-top: 10px;"></div>		

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORRIS		
Location: 306-Degree Barrier-Booster Flange		
Secondary O-ring Observations:		
Yes	No	Comment #
_____	✓ _____	_____
_____	✓ _____	_____
Notes / Comments		
Preliminary PFAR(s)? _____ Yes _____ No ✓ _____ Preliminary PFAR Number(s): _____		

Clarification Form(s)? _____ Yes _____ No ✓ _____ Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92	
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORGAN			
Location: 18-Degree SII			
SII Observations:			
	Yes	No	Comment #
A. Sooted Metal Surfaces?	_____	_____/_____ ✓	_____
B. Soot To or Past O-ring?	_____	_____/_____ ✓	_____
C. Foreign Material?	_____	_____/_____ ✓	_____
D. O-ring Damage (In Groove)?	_____	_____/_____ ✓	_____
E. Heat Affected or Eroded O-ring (In Groove)?	_____	_____/_____ ✓	_____
F. Excessive or No Grease on O-ring?	_____	_____/_____ ✓	_____
G. Excessive Grease on SII?	_____	_____/_____ ✓	_____
H. Corrosion?	_____	_____/_____ ✓	_____
I. Thread Damage (Visible at Removal)?	_____	_____/_____ ✓	_____
SII Port Observations:			
J. Sooted Metal Surfaces?	_____	_____/_____ ✓	_____
K. Foreign Material?	_____	_____/_____ ✓	_____
L. Excessive Grease?	_____	_____/_____ ✓	_____
M. Corrosion?	_____	_____/_____ ✓	_____
N. Metal Damage?	_____/_____ ✓	_____/_____ ✓	_____/_____ 1
O. Heat Affected Metal?	_____	_____/_____ ✓	_____
P. Obstructed Leak Check Through Hole?	_____	_____/_____ ✓	_____
Notes / Comments			
1. TYPICAL GALLING ON LAND BETWEEN PRIMARY AND SECONDARY SEALING SURFACES. GALLING IS DUE TO SEALING WASHER WELD.			
Preliminary PFAR(s)? _____ Yes _____ No _____ Preliminary PFAR Number(s): _____			

Clarification Form(s)? _____ Yes _____ No _____ Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MOREAN		
Location: 18-Degree SII		
Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes _____ No _____	No _____ Yes _____
B. O-ring Defects/Damage?	_____ _____	_____ _____
Secondary O-ring Observations:		
C. Heat Affected or Eroded O-ring?	_____ _____	_____ _____
D. O-ring Defects/Damage?	_____ _____	_____ _____
Notes / Comments Special Issues 3.2.2.1 action; Evaluated SII O-Rings (P/N 1450228-47) Per Section 3.4.2		
Preliminary PFAR(s)? _____ Yes _____ No _____		
Preliminary PFAR Number(s): _____		

Clarification Form(s)? _____ Yes _____ No _____ Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MCKEAN		
Location: 198-Degree SII		

<u>SII Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on SII?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>SII Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Leak Check Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

1. Typical Galling due to Sealing Washer Weld on the land between Primary and Secondary Sealing Surfaces.

Preliminary PFAR(s)?	Yes	<input checked="" type="checkbox"/> No	Preliminary PFAR Number(s):
Clarification Form(s)?	Yes	<input checked="" type="checkbox"/> No	Clarification Form Page No. (s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. HYER, M. LYON, T. MORGAN		
Location: 198-Degree SII		
SII Observations:		
Yes	No	Comment #
_____	✓ _____	_____
_____	✓ _____	_____
_____	✓ _____	_____
Notes / Comments		

Preliminary PFAR(s)? _____ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 13 AUG 92
Assessment Engineer(s)/Inspector(s): R. BRIGGS, G. AYER, M. LYON, T. MORGAN		
Location: 198-Degree SII		
<u>Primary O-ring Observations:</u>	Yes	No
A. Heat Affected or Eroded O-ring?	_____	✓ _____
B. O-ring Defects/Damage?	_____	✓ _____
<u>Secondary O-ring Observations:</u>		
C. Heat Affected or Eroded O-ring?	_____	✓ _____
D. O-ring Defects/Damage?	_____	✓ _____
<u>Notes / Comments</u> Special Issues 3.2.2.1 action; evaluated SII O-Ring (P/N 1450228-47) Per Section 3.4.2		
Preliminary PFAR(s)?	Yes _____ No ✓ _____	Preliminary PFAR Number(s): _____
Clarification Form(s)?	Yes _____ No ✓ _____	Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): Diane Garecht		
Joint: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		

Internal Nozzle Joint Observations:	Yes	No	Comment #
A. Soot To or Past O-rings?	✓		①
B. Heat Affected Metal?		✓	
C. Foreign Material?		✓	
D. RTV in Contact With or Past the Primary O-ring?		✓	
E. O-ring Damage (In Groove)?		✓	
F. Heat Affected or Eroded O-rings (In Groove)?		✓	
G. Excessive or No Grease?		✓	
H. Corrosion?	✓		②
I. Metal Damage?		✓	

Notes / Comments

① ~~soot to primary O-ring @ 44-46, 252-264, 228 (intermittant)~~
soot to primary O-ring @ 44-46, 272-274, 162-174,

Typical scalloped sooting noted (up to the middle of the bolts)

② light/medium corrosion corresponding to soot pattern on mating part.

Preliminary PFAR(s)?	Yes	✓ No	Preliminary PFAR Number(s):
Clarification Form(s)?	Yes	✓ No	Clarification Form Page No.(s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <i>Diane Garecht</i>		
Joint: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		
Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes _____ No <input checked="" type="checkbox"/>	Comment # _____
B. O-ring Damage/Defects?	_____ <input checked="" type="checkbox"/>	_____
Secondary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	_____ <input checked="" type="checkbox"/>	_____
B. O-ring Damage/Defects?	_____ <input checked="" type="checkbox"/>	_____
Notes / Comments		
Preliminary PFAR(s)? ____ Yes <input checked="" type="checkbox"/> No Preliminary PFAR Number(s): _____		

Clarification Form(s)? ____ Yes ☒ No Clarification Form Page No.(s): _____

REVISION ____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
--------------------	----------------	---------------

Assessment Engineer(s)/Inspector(s): <i>Diane Carecht</i>

Location: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)

Leak Check Plug Observations:

	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Leak Check Port Observations:

J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Breakaway 37 in-lb
Running 8 in-lb

Preliminary PFAR(s)? ☐ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92												
Assessment Engineer(s)/Inspector(s): <u>Diane Garecht</u>														
Location: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)														
<u>Leak Check Plug Observations:</u> A. Foreign Material Between the O-ring and Plug? B. Heat Affected Metal? C. Seal Surface/Thread Damage?	<table style="margin: auto;"><tr><td>Yes</td><td>No</td></tr><tr><td>_____</td><td style="text-align: center;">✓ _____</td></tr><tr><td>_____</td><td style="text-align: center;">✓ _____</td></tr><tr><td>_____</td><td style="text-align: center;">✓ _____</td></tr></table>	Yes	No	_____	✓ _____	_____	✓ _____	_____	✓ _____	<table style="margin: auto;"><tr><td>Comment #</td></tr><tr><td>_____</td></tr><tr><td>_____</td></tr><tr><td>_____</td></tr></table>	Comment #	_____	_____	_____
Yes	No													
_____	✓ _____													
_____	✓ _____													
_____	✓ _____													
Comment #														

Notes / Comments														

Preliminary PFAR(s)? _____ Yes ✓ No Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ✓ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <i>Diane Garecht</i>		
Location: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		
Secondary O-ring Observations:		
Yes	No	Comment #
_____	_____ ✓	_____
A. Heat Affected or Eroded O-ring?		
_____	_____ ✓	_____
B. O-ring Defects/Damage?		
Notes / Comments		

Preliminary PFAR(s)? _____ Yes _____ ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes _____ ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): Diane Garecht		
Joint: Nose Inlet-to-Throat (Joint #3)		

Internal Nozzle Joint Observations:

- | | Yes | No | Comment # |
|--|-----|----|-----------|
| A. Soot To or Past O-rings? | | ✓ | |
| B. Heat Affected Metal? | | ✓ | |
| C. Foreign Material? | | ✓ | |
| D. RTV in Contact With or Past the Primary O-ring? | | ✓ | |
| E. O-ring Damage (In Groove)? | | ✓ | |
| F. Heat Affected or Eroded O-rings (In Groove)? | | ✓ | |
| G. Excessive or No Grease? | | ✓ | |
| H. Corrosion? | ✓ | | ① |
| I. Metal Damage? | | ✓ | |

Notes / Comments

Special Issues 3.2.3.2 No metal damage or corrosion except that which is noted in ①.

① Light/medium corrosion on housing intermittent full circumference

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s):

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint)-O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <u>Diane Barecht</u>		
Joint: Nose Inlet-to-Throat (Joint #3)		
Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes _____	No <u>✓</u> _____
B. O-ring Damage/Defects?	_____	_____
Secondary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	_____	<u>✓</u> _____
B. O-ring Damage/Defects?	_____	_____
Notes / Comments		
Preliminary PFAR(s)? _____ Yes _____ <u>✓</u> No _____ Preliminary PFAR Number(s): _____		
Clarification Form(s)? _____ Yes _____ <u>✓</u> No _____ Clarification Form Page No.(s): _____		

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/Sil and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92	
Assessment Engineer(s)/Inspector(s): <i>Diane Garecht</i>			
Location: Nose Inlet-to-Throat (Joint #3)			
Leak Check Plug Observations:			
	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Leak Check Port Observations:			
J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Notes / Comments <i>Breakaway 38 in 16</i> <i>Running 12 in 16</i>			
Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Preliminary PFAR Number(s): _____			
Clarification Form(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Clarification Form Page No.(s): _____			

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <u>Diane Garecht</u>		
Location: Nose Inlet-to-Throat (Joint #3)		
Leak Check Plug Observations:		
	Yes	No
A. Foreign Material Between the O-ring and Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Seal Surface/Thread Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notes / Comments		

Preliminary PFAR(s)? Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025 Side: Left (A) Date: 8/14/92

Assessment Engineer(s)/Inspector(s): Diane Garecht

Joint: Throat-to-Forward Exit Cone (Joint #4)

Internal Nozzle Joint Observations:

	Yes	No	Comment #
A. Soot To or Past O-rings?		✓	
B. Heat Affected Metal?		✓	
C. Foreign Material?		✓	
D. RTV in Contact With or Past the Primary O-ring?	①		
E. O-ring Damage (In Groove)?		✓	
F. Heat Affected or Eroded O-rings (In Groove)?		✓	
G. Excessive or No Grease?		✓	
H. Corrosion?		✓	
I. Metal Damage?		✓	

Notes / Comments

Special Issues 3.2.3.2

~~Light to medium intermittent corrosion on throat support housing (aft surface). No metal damage noted on throat support housing fwd & aft seal surfaces with the following exceptions: Burnishing on fwd seal surface (throat) @ 130 deg (0.1 circum x 0.1 radial) and 133 deg (0.63 circum x 0.1 radial). RTV to primary 0-45, 83-105 & 173-300 deg.~~

Spec. Issue 3.2.3.2.

Light to medium intermittent corrosion on throat support housing (aft surface). No metal damage noted on throat support housing fwd & aft seal surfaces with the following exceptions:

Burnishing on fwd seal surface (throat) @
130 deg (0.1 circum x 0.1 radial) and
133 deg (0.63 circum x 0.1 radial)

RTV to primary 0-45, 83-105 & 173-300 deg

Preliminary PFAR(s)? Yes ☒ No

Preliminary PFAR Number(s):

Clarification Form(s)? Yes ☒ No

Clarification Form Page No.(s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 8/14/92
Assessment Engineer(s)/Inspector(s): <i>Deane Harecht</i>		
Location: Throat-to-Forward Exit Cone (Joint #4)		

Leak Check Plug Observations:

	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Leak Check Port Observations:

J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Breakaway 40 in. lb
Running 10-14 in. lb.

Preliminary PFAR(s)?	Yes	<input checked="" type="checkbox"/> No	Preliminary PFAR Number(s):
Clarification Form(s)?	Yes	<input checked="" type="checkbox"/> No	Clarification Form Page No.(s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/14/92												
Assessment Engineer(s)/Inspector(s): <i>Diane Harecht</i>														
Location: Throat-to-Forward Exit Cone (Joint #4)														
<u>Leak Check Plug Observations:</u> A. Foreign Material Between the O-ring and Plug? B. Heat Affected Metal? C. Seal Surface/Thread Damage?	<table style="margin: auto;"><tr><td>Yes</td><td>No</td></tr><tr><td>_____</td><td style="text-align: center;">✓ _____</td></tr><tr><td>_____</td><td style="text-align: center;">✓ _____</td></tr><tr><td>_____</td><td style="text-align: center;">✓ _____</td></tr></table>	Yes	No	_____	✓ _____	_____	✓ _____	_____	✓ _____	<table style="margin: auto;"><tr><td>Comment #</td></tr><tr><td>_____</td></tr><tr><td>_____</td></tr><tr><td>_____</td></tr></table>	Comment #	_____	_____	_____
Yes	No													
_____	✓ _____													
_____	✓ _____													
_____	✓ _____													
Comment #														

Notes / Comments														
Preliminary PFAR(s)? _____ Yes _____ <input checked="" type="checkbox"/> No _____ Preliminary PFAR Number(s): _____														
Clarification Form(s)? _____ Yes _____ <input checked="" type="checkbox"/> No _____ Clarification Form Page No. (s): _____														

POSTFLIGHT OBSERVATION RECORD (PFOR) B-8
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 8/14/92
Assessment Engineer(s)/Inspector(s): <i>Diane L. Gault</i>		
Location: Throat-to-Forward Exit Cone (Joint #4)		

Secondary O-ring Observations:

- A. Heat Affected or Eroded O-ring?
B. O-ring Defects/Damage?

Yes

No

Comment #

_____	_____ ✓	_____
_____	_____ ✓	_____

Notes / Comments

Preliminary PFAR(s)? _____ Yes _____ No ☒ Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes _____ No ☒ Clarification Form Page No. (s): _____

REVISION _____

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SEC	PAGE	B-29

POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Left (A)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Joint: Aft End Ring-to-Fixed Housing (Joint #5)		

Internal Nozzle Joint Observations:

	Yes	No	Comment #
A. Soot To or Past O-rings?	_____	<input checked="" type="checkbox"/>	_____
B. Heat Affected Metal?	_____	<input checked="" type="checkbox"/>	_____
C. Foreign Material?	_____	<input checked="" type="checkbox"/>	_____
D. RTV in Contact With or Past the Primary O-ring?	_____	<input checked="" type="checkbox"/>	_____
E. O-ring Damage (In Groove)?	_____	<input checked="" type="checkbox"/>	_____
F. Heat Affected or Eroded O-rings (In Groove)?	_____	<input checked="" type="checkbox"/>	_____
G. Excessive or No Grease?	_____	<input checked="" type="checkbox"/>	_____
H. Corrosion?	<input checked="" type="checkbox"/>	_____	1
I. Metal Damage?	_____	<input checked="" type="checkbox"/>	_____

Notes / Comments

Special Issues 3.2.3.1 - No metal damage or rounded chamfers observed on bolt through hole spotfaces.

1- Medium to heavy corrosion observed on I.D. lip of aft end ring intermittently full circumference.

Preliminary PFAR(s)? _____ Yes ☒ No

Preliminary PFAR Number(s): _____

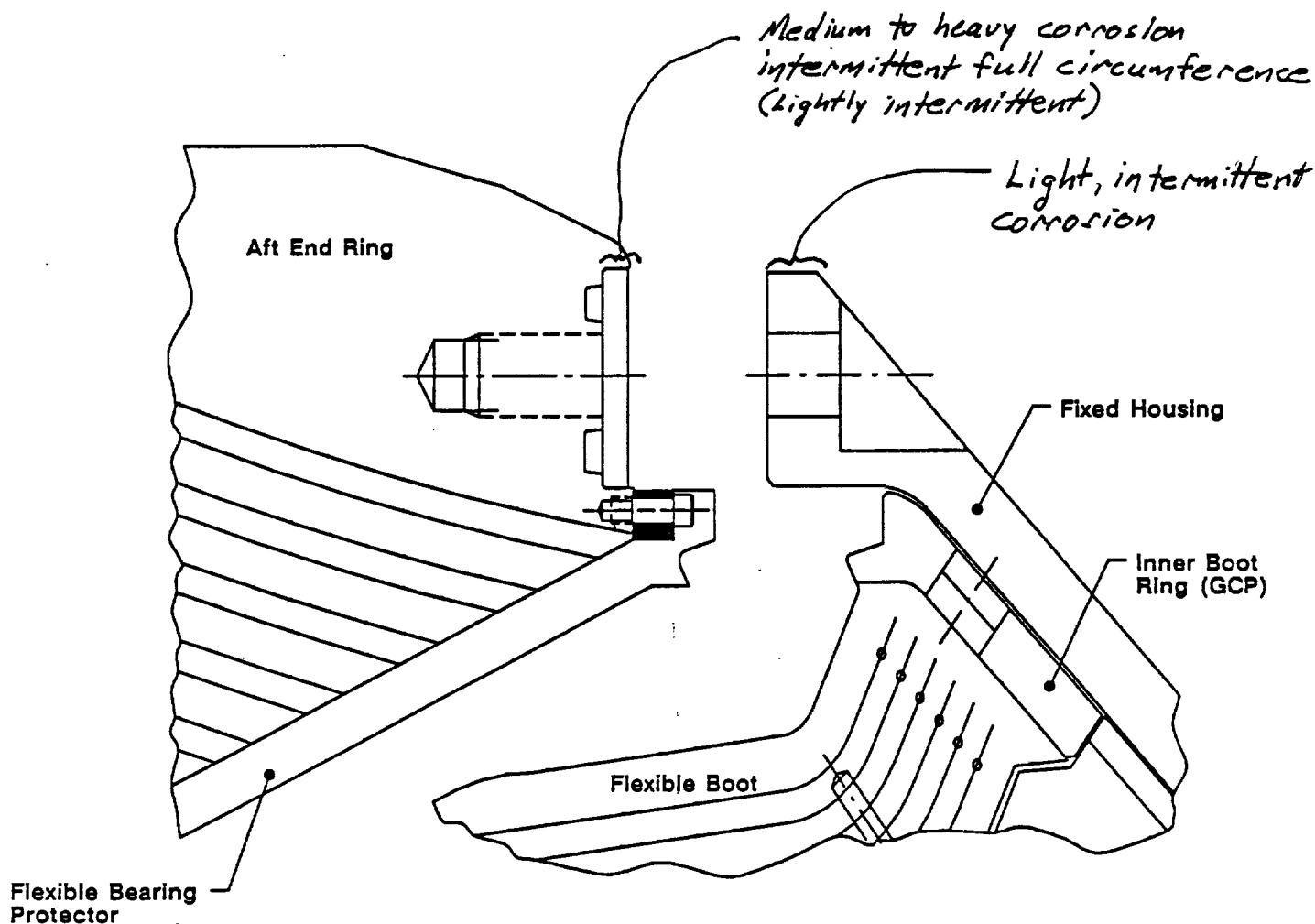
Clarification Form(s)? ☒ Yes _____ No

Clarification Form Page No.(s): B-30A

Aft End Ring-to-Fixed Housing Joint (Joint #5) Clarification Form

Motor No.: 360T025	Side: <input checked="" type="checkbox"/> Left (A) <input type="checkbox"/> Right (B)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		

Sketch Observations Below (include locations and sizes of sketched features):



Corresponding Comment Number(s): 1

REVISION _____

DOC NO.	TWR-60699	VOL
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POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A) .	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Joint: Aft End Ring-to-Fixed Housing (Joint #5)		
Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes _____	No _____ ✓
B. O-ring Damage/Defects?	_____	_____ ✓
Secondary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	_____	_____ ✓
B. O-ring Damage/Defects?	_____	_____ ✓
Notes / Comments		

Preliminary PFAR(s)? Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Left (A)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Location: Aft End Ring-to-Fixed Housing (Joint #5)		

<u>Leak Check Plug Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	_____	____✓____	_____
B. Soot To or Past O-ring?	_____	____✓____	_____
C. Foreign Material?	_____	____✓____	_____
D. O-ring Damage (In Groove)?	_____	____✓____	_____
E. Heat Affected or Eroded O-ring (In Groove)?	_____	____✓____	_____
F. Excessive or No Grease on O-ring?	_____	____✓____	_____
G. Excessive Grease on Plug?	_____	____✓____	_____
H. Corrosion?	_____	____✓____	_____
I. Thread Damage (Visible at Removal)?	_____	____✓____	_____

<u>Leak Check Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	_____	____✓____	_____
K. Foreign Material?	_____	____✓____	_____
L. Excessive Grease?	_____	____✓____	_____
M. Corrosion?	_____	____✓____	_____
N. Metal Damage?	_____	____✓____	_____
O. Heat Affected Metal?	_____	____✓____	_____
P. Obstructed Through Hole?	_____	____✓____	_____

Notes / Comments

Breakaway Torque = 35 in-lb

Running Torque = 12 in-lb

Preliminary PFAR(s)? _____ Yes ☒ No

Clarification Form(s)? _____ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Location: Aft End Ring-to-Fixed Housing (Joint #5)		
Leak Check Plug Observations:		
	Yes	No
A. Foreign Material Between the O-ring and Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Seal Surface/Thread Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notes / Comments		
Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Preliminary PFAR Number(s): _____		

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Location: Aft End Ring-to-Fixed Housing (Joint #5)		
Secondary O-ring Observations:		
	Yes	No
A. Heat Affected or Eroded O-ring?	_____	_____ ✓
B. O-ring Defects/Damage?	_____	_____ ✓
Notes / Comments		
Preliminary PFAR(s)? _____ Yes _____ No <input checked="" type="checkbox"/> Preliminary PFAR Number(s): _____		
Clarification Form(s)? _____ Yes _____ No <input checked="" type="checkbox"/> Clarification Form Page No.(s): _____		

POSTFLIGHT OBSERVATION RECORD (PFOR) B-8
Packing With Retainer Condition (Detailed)

Motor No.: 360T025	Side: Left (A)	Date: 17 Aug 1992																
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon																		
Joint: Aft End Ring-to-Fixed Housing (Joint #5)																		
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;">Packing With Retainer Observations:</th> <th style="width:10%;">Yes</th> <th style="width:10%;">No</th> <th style="width:20%;">Comment #</th> </tr> </thead> <tbody> <tr> <td>A. Heat Affected or Eroded Seal or Retainer?</td> <td style="text-align:center;">✓</td> <td style="text-align:center;">✓</td> <td></td> </tr> <tr> <td>B. Seal or Retainer Damage/Defects?</td> <td style="text-align:center;">✓</td> <td></td> <td style="text-align:center;">1</td> </tr> <tr> <td>C. Corrosion?</td> <td></td> <td style="text-align:center;">✓</td> <td></td> </tr> </tbody> </table>			Packing With Retainer Observations:	Yes	No	Comment #	A. Heat Affected or Eroded Seal or Retainer?	✓	✓		B. Seal or Retainer Damage/Defects?	✓		1	C. Corrosion?		✓	
Packing With Retainer Observations:	Yes	No	Comment #															
A. Heat Affected or Eroded Seal or Retainer?	✓	✓																
B. Seal or Retainer Damage/Defects?	✓		1															
C. Corrosion?		✓																
<p>Notes / Comments</p> <p>Special Issues 3.2.3.1 - No metal damage or rounded chamfers observed on bolt through hole spotfaces.</p> <p>1- Typical disassembly damage to all all 72 Packing with Retainer elastomers. (Rubber element).</p>																		
Preliminary PFAR(s)? Yes <input checked="" type="checkbox"/> No Preliminary PFAR Number(s): _____																		

Clarification Form(s)? Yes ☒ No Clarification Form Page No.(s): _____

REVISION _____

DOC NO. TWR-60699	VOL
SEC	PAGE B-35

POSTFLIGHT OBSERVATION RECORD (PFOR) B-9
Case Factory Joint Condition

Motor No.: 360T025	Side: Left (A)	Date: 11-23-92																
Assessment Engineer(s)/Inspector(s): ERIC HAY																		
Factory Joint: Forward Dome																		
<p>Case Factory Joint Observations:</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;"></th> <th style="width:10%; text-align: center;">Yes</th> <th style="width:10%; text-align: center;">No</th> <th style="width:20%; text-align: center;">Comment #</th> </tr> </thead> <tbody> <tr> <td>A. Heat Affected or Eroded Joint O-ring?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>#1</td> </tr> <tr> <td>B. Heavy Corrosion in Joint?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> </tr> <tr> <td>C. Heavy Corrosion in Leak Check Port?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> </tr> </tbody> </table> <p>Note: Heavy corrosion is defined as corrosion that causes pitting. It may be necessary to remove corrosion to determine if pitting has occurred; however, care should be taken not to damage the hardware. A cloth dampened with solvent or green Scotch-Brite® pads may be used to remove the corrosion. Corrosion removal is to be done in a circumferential direction only.</p>				Yes	No	Comment #	A. Heat Affected or Eroded Joint O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	#1	B. Heavy Corrosion in Joint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		C. Heavy Corrosion in Leak Check Port?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Yes	No	Comment #															
A. Heat Affected or Eroded Joint O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	#1															
B. Heavy Corrosion in Joint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
C. Heavy Corrosion in Leak Check Port?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
<p>Notes / Comments</p> <p>Special Issues 3.2.1.1</p> <p>#1 PRI-ORING HAS WATER KNIFE DAMAGE AND WAS BROKE AT 250°. O-RING DID NOT FALL OUT OF CLEVIS UPON DISASSEMBLY AND 0° AND 90° WERE MARKED.</p>																		
<p>Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Preliminary PFAR Number(s): _____</p>																		
<p>Clarification Form(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Clarification Form Page No.(s): _____</p>																		

POSTFLIGHT OBSERVATION RECORD (PFOR) B-9
Case Factory Joint Condition

Motor No.: 360T025	Side: Left (A)	Date: 11-23-92
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Assessment Engineer(s)/Inspector(s): DARRYL MARBLE

Factory Joint: Forward

Case Factory Joint Observations:

	Yes	No	Comment #
A. Heat Affected or Eroded Joint O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	#1
B. Heavy Corrosion in Joint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Heavy Corrosion in Leak Check Port?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Note: Heavy corrosion is defined as corrosion that causes pitting. It may be necessary to remove corrosion to determine if pitting has occurred; however, care should be taken not to damage the hardware. A cloth dampened with solvent or green Scotch-Brite® pads may be used to remove the corrosion. Corrosion removal is to be done in a circumferential direction only.

Notes / Comments

Special Issues 3.2.1.1

#1 PRIMARY ORING HAS WATER KNIFE DAMAGE INTERMITTENTLY 360° AROUND ORING AND IS CUT AT 321°, ORING DID NOT FALL OUT OF CLEVIS UPON DISASSEMBLY AND 0° AND 90° WERE MARKED WITH TAPE, ORING CUT IN HALF AT 321°

Preliminary PFAR(s)? ☐ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-9
Case Factory Joint Condition

Motor No.: <u>ESRM 25</u>	Side: <input checked="" type="checkbox"/> Left (A) <input type="checkbox"/> Right (B)	Date: <u>02-01-93</u>
Assessment Engineer(s)/Inspector(s): <u>SCHENCK</u>		
Factory Joint: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Forward Dome <input type="checkbox"/> Forward <input type="checkbox"/> Forward Center <input checked="" type="checkbox"/> Aft Center </div> <div style="width: 45%;"> <input type="checkbox"/> ET Attach/Stiffener <input type="checkbox"/> Stiffener/Stiffener <input type="checkbox"/> Aft Dome </div> </div>		

Case Factory Joint Observations:

	Yes	No	Comment #
A. Heat Affected or Eroded Joint O-ring?	_____	<u>✓</u>	_____
B. Heavy Corrosion in Joint?	_____	<u>✓</u>	_____
C. Heavy Corrosion in Leak Check Port?	_____	<u>✓</u>	_____

Note: Heavy corrosion is defined as corrosion that causes pitting. It may be necessary to remove corrosion to determine if pitting has occurred; however, care should be taken not to damage the hardware. A cloth dampened with solvent or gray Scotch-Brite® pads may be used to remove the corrosion. Corrosion removal is to be done in a circumferential direction only.

Notes / Comments

LIGHT FIZETTING LESS THAN 0.001"
WAS NOTED INTERMITTENTLY ON THE
TAN 6

Preliminary PFAR(s)? _____ Yes ☐ No ☒

Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☐ No ☒

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-2
S&A Device (Barrier-Booster and Environmental Seal Regions) Condition

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan		

Barrier-Booster Bore and Rotor Observations:

	Yes	No	Comment #
A. Heat Affected or Eroded O-ring (In Groove)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-rings?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1
C. Heat Affected Metal?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Metal Damage?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Corrosion?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Foreign Material?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Teflon Retainer Damage?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Environmental Seal Region Observations:

J. Environmental O-ring Assembly Damage (Visible Without Magnification)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Special Issues 3.2.3.3 → NO CORROSION WAS OBSERVED ON ROTOR DETENT BALL SPRING.

1.) Typical soot up to Forward Primary O-Ring, but not past.

Preliminary PFAR(s)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Preliminary PFAR Number(s):
Clarification Form(s)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Clarification Form Page No.(s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-7
S&A Rotor Shaft O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan		
Location: S&A Device Barrier-Booster Rotor Shaft		
Forward Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
B. O-ring Defects/Damage?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
Aft Primary O-ring Observations:		
C. Heat Affected or Eroded O-ring?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
D. O-ring Defects/Damage?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
Forward Secondary O-ring Observations:		
E. Heat Affected or Eroded O-ring?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
F. O-ring Defects/Damage?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
Aft Secondary O-ring Observations:		
G. Heat Affected or Eroded O-ring?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
H. O-ring Defects/Damage?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Comment # _____
Notes / Comments		
Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Preliminary PFAR Number(s): _____		

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/Sil and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan		
Location: 126-Degree Barrier-Booster Bore		

Leak Check Plug Observations:

	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Leak Check Port Observations:

J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan		
Location: 126-Degree Barrier-Booster Bore		
Leak Check Plug Observations:		
	Yes	No
A. Foreign Material Between the O-ring and Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Seal Surface/Thread Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comment #		
<div style="border: 1px solid black; height: 150px; margin-top: 10px;"></div>		

Preliminary PFAR(s)? ☐ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No

Clarification Form Page No. (s): _____

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POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/Sil and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan		
Location: 306-Degree Barrier-Booster Flange		
Leak Check Plug Observations:		
	Yes	No
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Leak Check Port Observations:		
J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notes / Comments		
Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Preliminary PFAR Number(s): _____		

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92												
Assessment Engineer(s)/Inspector(s): <u>R. Briggs, G. Hyer, M. Lyon, T. Morgan</u>														
Location: 306-Degree Barrier-Booster Flange														
<u>Leak Check Plug Observations:</u> A. Foreign Material Between the O-ring and Plug? B. Heat Affected Metal? C. Seal Surface/Thread Damage?	<table style="margin: auto;"><thead><tr><th>Yes</th><th>No</th></tr></thead><tbody><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____/_____ ✓</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____/_____ ✓</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____/_____ ✓</td></tr></tbody></table>	Yes	No	_____	_____/_____ ✓	_____	_____/_____ ✓	_____	_____/_____ ✓	<table style="margin: auto;"><thead><tr><th>Comment #</th></tr></thead><tbody><tr><td style="text-align: center;">_____</td></tr><tr><td style="text-align: center;">_____</td></tr><tr><td style="text-align: center;">_____</td></tr></tbody></table>	Comment #	_____	_____	_____
Yes	No													
_____	_____/_____ ✓													
_____	_____/_____ ✓													
_____	_____/_____ ✓													
Comment #														

Notes / Comments														
Preliminary PFAR(s)? _____ Yes <u>✓</u> No Preliminary PFAR Number(s): _____														

Clarification Form(s)? _____ Yes ✓ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed).

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan		
Location: 306-Degree Barrier-Booster Flange		
Secondary O-ring Observations:		
	Yes	No
A. Heat Affected or Eroded O-ring?	_____	_____/_____ ✓
B. O-ring Defects/Damage?	_____	_____/_____ ✓
Notes / Comments		

Preliminary PFAR(s)? _____ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92
Assessment Engineer(s)/Inspector(s): <u>P. Briggs, G. Hyer, M. Lyon, T. Morgan</u>		
Location: 18-Degree SII		

<u>SII Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	_____	✓ _____	_____
B. Soot To or Past O-ring?	_____	✓ _____	_____
C. Foreign Material?	_____	✓ _____	_____
D. O-ring Damage (In Groove)?	_____	✓ _____	_____
E. Heat Affected or Eroded O-ring (In Groove)?	_____	✓ _____	_____
F. Excessive or No Grease on O-ring?	_____	✓ _____	_____
G. Excessive Grease on SII?	_____	✓ _____	_____
H. Corrosion?	_____	✓ _____	_____
I. Thread Damage (Visible at Removal)?	_____	✓ _____	_____

<u>SII Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	_____	✓ _____	_____
K. Foreign Material?	_____	✓ _____	_____
L. Excessive Grease?	_____	✓ _____	_____
M. Corrosion?	_____	✓ _____	_____
N. Metal Damage?	✓ _____	_____	1
O. Heat Affected Metal?	_____	✓ _____	_____
P. Obstructed Leak Check Through Hole?	_____	✓ _____	_____

Notes / Comments

#1) Typical Galling due to the SII Washer Weld on the land between the Primary and Secondary Sealing Surfaces.

Preliminary PFAR(s)? _____ Yes ☒ No _____ Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No _____ Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92	
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan			
Location: 18-Degree SII			
SII Observations:			
A. Foreign Material Between the O-ring and SII?	Yes _____	No _____/_____ ✓	Comment # _____
B. Heat Affected Metal?	_____	_____/_____ ✓	_____
C. Seal Surface/Thread Damage?	_____	_____/_____ ✓	_____
Notes / Comments			

Preliminary PFAR(s)? _____ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No

Clarification Form Page No. (s): _____

REVISION _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/13/92	
Assessment Engineer(s)/Inspector(s): R. Briggs, G. Hyer, M. Lyon, T. Morgan			
Location: 198-Degree SII			
SII Observations:			
	Yes	No	Comment #
A. Sooted Metal Surfaces?	_____	✓	_____
B. Soot To or Past O-ring?	_____	✓	_____
C. Foreign Material?	_____	✓	_____
D. O-ring Damage (In Groove)?	_____	✓	_____
E. Heat Affected or Eroded O-ring (In Groove)?	_____	✓	_____
F. Excessive or No Grease on O-ring?	_____	✓	_____
G. Excessive Grease on SII?	_____	✓	_____
H. Corrosion?	_____	✓	_____
I. Thread Damage (Visible at Removal)?	_____	✓	_____
SII Port Observations:			
J. Sooted Metal Surfaces?	_____	✓	_____
K. Foreign Material?	_____	✓	_____
L. Excessive Grease?	_____	✓	_____
M. Corrosion?	_____	✓	_____
N. Metal Damage?	✓	_____	1
O. Heat Affected Metal?	_____	✓	_____
P. Obstructed Leak Check Through Hole?	_____	✓	_____
Notes / Comments			
1) Typical balling due to SII Washer Weld on land between the primary and Secondary Sealing Surfaces			
Preliminary PFAR(s)? _____ Yes _____ No			
Preliminary PFAR Number(s): _____			
Clarification Form(s)? _____ Yes _____ No			
Clarification Form Page No.(s): _____			

POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <i>Diane Barecht</i>		
Joint: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		

Internal Nozzle Joint Observations:

- | | Yes | No | Comment # |
|--|-------------------------------------|-------------------------------------|-----------|
| A. Soot To or Past O-rings? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ① |
| B. Heat Affected Metal? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| C. Foreign Material? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| D. RTV in Contact With or Past the Primary O-ring? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E. O-ring Damage (In Groove)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| F. Heat Affected or Eroded O-rings (In Groove)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| G. Excessive or No Grease? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| H. Corrosion? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ② |
| I. Metal Damage? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Notes / Comments

- ① Soot to primary 56-60, 150-156, 218-222 deg. Typical scalloped sooting to mid-point of bolt holes.
- ② Light/medium corrosion corresponding to soot pattern on mating part.

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <i>Diane Garecht</i>		
Joint: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		
Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes _____ No _____ <input checked="" type="checkbox"/>	Comment # _____ _____
B. O-ring Damage/Defects?	_____ _____ <input checked="" type="checkbox"/>	_____ _____
Secondary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	_____ _____ <input checked="" type="checkbox"/>	_____ _____
B. O-ring Damage/Defects?	_____ _____ <input checked="" type="checkbox"/>	_____ _____
Notes / Comments		

Preliminary PFAR(s)? ____ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ____ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/Sil and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <i>Diane Barecht</i>		
Location: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		

Leak Check Plug Observations:

	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Leak Check Port Observations:

	Yes	No	Comment #
J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Breakaway 41 in. lb
Running 18 in. lb

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/8/92																
Assessment Engineer(s)/Inspector(s): <i>Diane Garecht</i>																		
Location: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)																		
<u>Leak Check Plug Observations:</u> A. Foreign Material Between the O-ring and Plug? B. Heat Affected Metal? C. Seal Surface/Thread Damage?	<table border="0" style="width: 100%;"><tr><td style="width: 50%;">Yes</td><td style="width: 50%;">No</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____✓</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____✓</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____✓</td></tr></table>	Yes	No	_____	_____✓	_____	_____✓	_____	_____✓	<table border="0" style="width: 100%;"><tr><td style="width: 50%;">Comment #</td><td style="width: 50%;"></td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr><tr><td style="text-align: center;">_____</td><td style="text-align: center;">_____</td></tr></table>	Comment #		_____	_____	_____	_____	_____	_____
Yes	No																	
_____	_____✓																	
_____	_____✓																	
_____	_____✓																	
Comment #																		
_____	_____																	
_____	_____																	
_____	_____																	
Notes / Comments																		
Preliminary PFAR(s)? _____ Yes <u>✓</u> No Preliminary PFAR Number(s): _____																		

Clarification Form(s)? _____ Yes ✓ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <i>Diane Garecht</i>		
Location: Nose Inlet-to-Flex Bearing-to-Cowl (Joint #2)		
<u>Secondary O-ring Observations:</u>	Yes	No
A. Heat Affected or Eroded O-ring?	_____	<u>✓</u>
B. O-ring Defects/Damage?	_____	<u>✓</u>
Comment # _____		

Notes / Comments

Preliminary PFAR(s)? _____ Yes ✓ No Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ✓ No Clarification Form Page No.(s): _____

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POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <u>Diane Garecht</u>		
Joint: Nose Inlet-to-Throat (Joint #3)		

Internal Nozzle Joint Observations:	Yes	No	Comment #
A. Soot To or Past O-rings?	✓		①
B. Heat Affected Metal?		✓	
C. Foreign Material?		✓	
D. RTV In Contact With or Past the Primary O-ring?		✓	
E. O-ring Damage (In Groove)?		✓	
F. Heat Affected or Eroded O-rings (In Groove)?		✓	
G. Excessive or No Grease?		✓	
H. Corrosion?	✓		②
I. Metal Damage?		✓	

Notes / Comments

Special Issues 3.2.3.2 ② light-medium corrosion noted on housing intermittent full circumference. No other corrosion noted. No metal damage noted.

① Soot reached the primary at 211-deg. The sooting was very light.

Preliminary PFAR(s)? _____ Yes _____ No ☒ Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes _____ No ☒ Clarification Form Page No.(s): _____

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POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <u>Diane Garecht</u>		
Joint: Nose Inlet-to-Throat (Joint #3)		
<u>Primary O-ring Observations:</u>	Yes	No
A. Heat Affected or Eroded O-ring?	<u> </u>	<u> ✓ </u>
B. O-ring Damage/Defects?	<u> </u>	<u> </u>
<u>Secondary O-ring Observations:</u>		
A. Heat Affected or Eroded O-ring?	<u> </u>	<u> ✓ </u>
B. O-ring Damage/Defects?	<u> </u>	<u> </u>
Notes / Comments		

Preliminary PFAR(s)? Yes ✓ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? Yes ✓ No

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <u>Diane Garrecht</u>		
Location: Nose Inlet-to-Throat (Joint #3)		

<u>Leak Check Plug Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	_____	<input checked="" type="checkbox"/>	_____
B. Soot To or Past O-ring?	_____	<input checked="" type="checkbox"/>	_____
C. Foreign Material?	_____	<input checked="" type="checkbox"/>	_____
D. O-ring Damage (In Groove)?	_____	<input checked="" type="checkbox"/>	_____
E. Heat Affected or Eroded O-ring (In Groove)?	_____	<input checked="" type="checkbox"/>	_____
F. Excessive or No Grease on O-ring?	_____	<input checked="" type="checkbox"/>	_____
G. Excessive Grease on Plug?	_____	<input checked="" type="checkbox"/>	_____
H. Corrosion?	_____	<input checked="" type="checkbox"/>	_____
I. Thread Damage (Visible at Removal)?	_____	<input checked="" type="checkbox"/>	_____

<u>Leak Check Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	_____	<input checked="" type="checkbox"/>	_____
K. Foreign Material?	_____	<input checked="" type="checkbox"/>	_____
L. Excessive Grease?	_____	<input checked="" type="checkbox"/>	_____
M. Corrosion?	_____	<input checked="" type="checkbox"/>	_____
N. Metal Damage?	_____	<input checked="" type="checkbox"/>	_____
O. Heat Affected Metal?	_____	<input checked="" type="checkbox"/>	_____
P. Obstructed Through Hole?	_____	<input checked="" type="checkbox"/>	_____

Notes / Comments

Breakaway 43 in. 16
Running 19 in. 16

Preliminary PFAR(s)? _____ Yes ☒ No

Clarification Form(s)? _____ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92												
Assessment Engineer(s)/Inspector(s): <u>Diane Garecht</u>														
Location: Nose Inlet-to-Throat (Joint #3)														
<u>Leak Check Plug Observations:</u> A. Foreign Material Between the O-ring and Plug? B. Heat Affected Metal? C. Seal Surface/Thread Damage?	<table style="margin: auto;"><tr><td>Yes</td><td>No</td></tr><tr><td>_____</td><td style="text-align: center;">↓</td></tr><tr><td>_____</td><td style="text-align: center;">✓</td></tr><tr><td>_____</td><td style="text-align: center;">✓</td></tr></table>	Yes	No	_____	↓	_____	✓	_____	✓	<table style="margin: auto;"><tr><td>Comment #</td></tr><tr><td>_____</td></tr><tr><td>_____</td></tr><tr><td>_____</td></tr></table>	Comment #	_____	_____	_____
Yes	No													
_____	↓													
_____	✓													
_____	✓													
Comment #														

Notes / Comments														

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/18/92
Assessment Engineer(s)/Inspector(s): <u>Diane Garecht</u>		
Location: Nose Inlet-to-Throat (Joint #3)		
Secondary O-ring Observations:		
Yes	No	Comment #
_____	_____ ✓	_____
A. Heat Affected or Eroded O-ring?		
_____	_____ ✓	_____
B. O-ring Defects/Damage?		
Notes / Comments		

Preliminary PFAR(s)? _____ Yes _____ ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes _____ ☒ No

Clarification Form Page No.(s): _____

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POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 8/14/92
Assessment Engineer(s)/Inspector(s): <i>Dean Hueselt</i>		
Joint: Throat-to-Forward Exit Cone (Joint #4)		

Internal Nozzle Joint Observations:	Yes	No	Comment #
A. Soot To or Past O-rings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. RTV in Contact With or Past the Primary O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Heat Affected or Eroded O-rings (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive or No Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input checked="" type="checkbox"/> (1)	<input type="checkbox"/>	
I. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Special Issues 3.2.3.2

D depth corrosion apparent to but not in footprint.

Range 230-255 deg. (first 4/100s)

High / medium corrosion with pitting thru throat seal surface @ following locations: 162-200 deg

Mild to heavy @ 250-251. Two mil pit was the deepest

Preliminary PFAR(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preliminary PFAR Number(s): 46C-02
Clarification Form(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Clarification Form Page No. (s):

POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/14/92
Assessment Engineer(s)/Inspector(s): <i>Deane Garrett</i>		
Joint: Throat-to-Forward Exit Cone (Joint #4)		
Primary O-ring Observations:		
Yes	No	Comment #
_____	<input checked="" type="checkbox"/>	_____
A. Heat Affected or Eroded O-ring?		
_____	<input checked="" type="checkbox"/>	_____
B. O-ring Damage/Defects?		
Secondary O-ring Observations:		
_____	<input checked="" type="checkbox"/>	_____
A. Heat Affected or Eroded O-ring?		
_____	<input checked="" type="checkbox"/>	_____
B. O-ring Damage/Defects?		
Notes / Comments		

Preliminary PFAR(s)? _____ Yes ☒ No _____ Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No _____ Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 8/14/92
Assessment Engineer(s)/Inspector(s): <u>Diane Garrett</u>		
Location: Throat-to-Forward Exit Cone (Joint #4)		

<u>Leak Check Plug Observations:</u>	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Leak Check Port Observations:</u>	Yes	No	Comment #
J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Breakaway 45 in. lb

Bringing 25 in. lb

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 8/11/12
Assessment Engineer(s)/Inspector(s): <i>K. H. H. H.</i>		
Location: Throat-to-Forward Exit Cone (Joint #4)		
Leak Check Plug Observations:		
	Yes	No
A. Foreign Material Between the O-ring and Plug?	_____	_____/_____ ✓
B. Heat Affected Metal?	_____	_____/_____ ✓
C. Seal Surface/Thread Damage?	_____	_____/_____ ✓
Notes / Comments		

Preliminary PFAR(s)? _____ Yes ~~_____ No~~ Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ~~_____ No~~ Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 7-1-92
Assessment Engineer(s)/Inspector(s): J. H. 114		
Location: Throat-to-Forward Exit Cone (Joint #4)		
Secondary O-ring Observations:		
	Yes	No
A. Heat Affected or Eroded O-ring?	_____	_____ <input checked="" type="checkbox"/> _____
B. O-ring Defects/Damage?	_____	_____ <input checked="" type="checkbox"/> _____
Comment #		

Notes / Comments		
Preliminary PFAR(s)? _____ Yes _____ No <input checked="" type="checkbox"/>		
Preliminary PFAR Number(s): _____		
Clarification Form(s)? _____ Yes _____ No <input checked="" type="checkbox"/>		
Clarification Form Page No.(s): _____		

POSTFLIGHT OBSERVATION RECORD (PFOR) B-3
Internal Nozzle Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Joint: Aft End Ring-to-Fixed Housing (Joint #5)		
Internal Nozzle Joint Observations: A. Soot To or Past O-rings? B. Heat Affected Metal? C. Foreign Material? D. RTV in Contact With or Past the Primary O-ring? E. O-ring Damage (In Groove)? F. Heat Affected or Eroded O-rings (In Groove)? G. Excessive or No Grease? H. Corrosion? I. Metal Damage?	Yes _____ _____ _____ _____ _____ _____ _____ _____ _____	No _____ _____ _____ _____ _____ _____ _____ _____ _____
		Comment # _____ _____ _____ 1 _____ _____ _____ 2 3

Notes / Comments

Special Issues 3.2.3.1 - No metal damage or rounded chamfers observed on bolt through hole chamfer spotfaces.

- 1- RTV in contact with primary O-ring from 150°-220° and 330° to 355°. No RTV observed past O-ring.
- 2 - Medium corrosion observed on the secondary seal surface (in O-ring footprint) on fixed housing at 323°. Corrosion occurred after splashdown.
- Medium to heavy corrosion observed on I.D. lip of aft end ring intermittently full circumference. Heaviest corrosion was from 160° to 0° to 100°.
- 3 - Several radial scratches observed across primary seal surface of fixed housing. Scratches could not be felt with 5-mil brass shim. Scratches located at 350°.

Preliminary PFAR(s)? _____ Yes ☒ No _____ Preliminary PFAR Number(s): _____

Clarification Form(s)? ☒ Yes _____ No _____ Clarification Form Page No.(s): B-72A

Aft End Ring-to-Fixed Housing Joint (Joint #5) Clarification Form

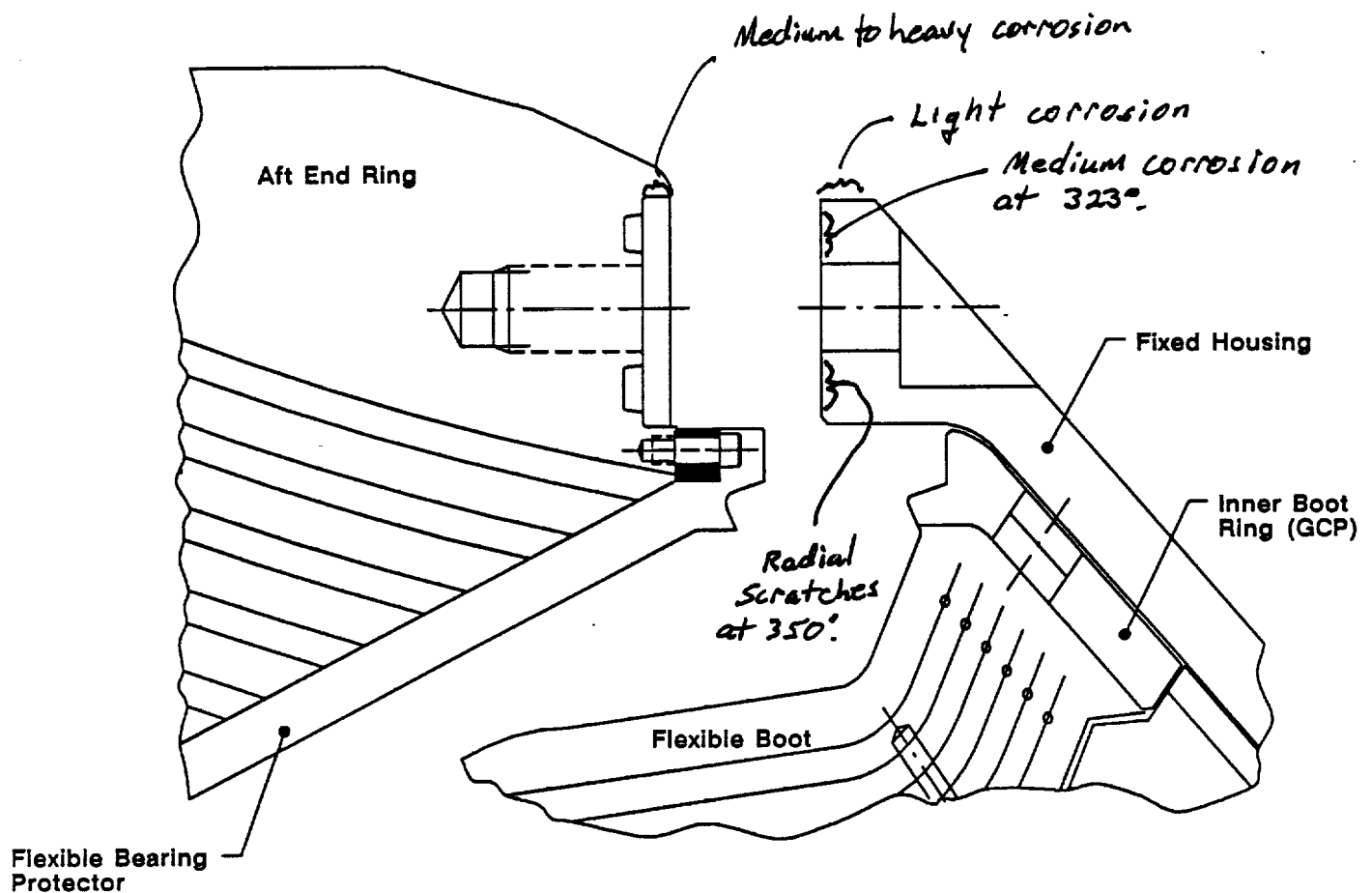
Motor No.: 360T025

Side: ☐ Left (A) ☒ Right (B)

Date: 17 Aug 1992

Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon

Sketch Observations Below (Include locations and sizes of sketched features):



Corresponding Comment Number(s): 1,2,3

REVISION _____

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SEC PAGE B-72A

POSTFLIGHT OBSERVATION RECORD (PFOR) B-5
Large Diameter (Joint) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Joint: Aft End Ring-to-Fixed Housing (Joint #5)		
Primary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	Yes _____ No _____	No _____ Yes _____
B. O-ring Damage/Defects?	_____ _____ _____	_____ _____ _____
Secondary O-ring Observations:		
A. Heat Affected or Eroded O-ring?	_____ _____ _____	_____ _____ _____
B. O-ring Damage/Defects?	_____ _____ _____	_____ _____ _____
Notes / Comments		
Preliminary PFAR(s)? _____ Yes _____ No _____		
Preliminary PFAR Number(s): _____		

Clarification Form(s)? _____ Yes _____ No _____

Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-1
Leak Check Plug/SII and Port Condition (At Removal)

Motor No.: 360T025	Side: Right (B)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Location: Aft End Ring-to-Fixed Housing (Joint #5)		

Leak Check Plug Observations:

	Yes	No	Comment #
A. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Soot To or Past O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. O-ring Damage (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Heat Affected or Eroded O-ring (In Groove)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Excessive or No Grease on O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Excessive Grease on Plug?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I. Thread Damage (Visible at Removal)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Leak Check Port Observations:

J. Sooted Metal Surfaces?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
K. Foreign Material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Excessive Grease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
M. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Metal Damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Heat Affected Metal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Obstructed Through Hole?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes / Comments

Breakaway Torque = 35 in-lbs
Running Torque = 10 in-lbs.

Preliminary PFAR(s)? ☐ Yes ☒ No Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-4
Leak Check Plug/SII Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Location: Aft End Ring-to-Fixed Housing (Joint #5)		
<u>Leak Check Plug Observations:</u>	Yes	No
A. Foreign Material Between the O-ring and Plug?	_____	_____ ✓
B. Heat Affected Metal?	_____	_____ ✓
C. Seal Surface/Thread Damage?	_____	_____ ✓
Notes / Comments		

Preliminary PFAR(s)? _____ Yes ☒ No _____ Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ☒ No _____ Clarification Form Page No.(s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-6
Small Diameter (Leak Check Plug/SII) O-ring Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 17 Aug 1992
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon		
Location: Aft End Ring-to-Fixed Housing (Joint #5)		
<u>Secondary O-ring Observations:</u>	Yes	No
A. Heat Affected or Eroded O-ring?	_____	_____ ✓
B. O-ring Defects/Damage?	_____	_____ ✓
Notes / Comments		

Preliminary PFAR(s)? _____ Yes ✓ No Preliminary PFAR Number(s): _____

Clarification Form(s)? _____ Yes ✓ No Clarification Form Page No.(s): _____

REVISION _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-8
Packing With Retainer Condition (Detailed)

Motor No.: 360T025	Side: Right (B)	Date: 17 Aug 1992																
Assessment Engineer(s)/Inspector(s): S. Eden, M. Lyon																		
Joint: Aft End Ring-to-Fixed Housing (Joint #5)																		
Packing With Retainer Observations: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;">Yes</th> <th style="width: 10%; text-align: center;">No</th> <th style="width: 20%; text-align: center;">Comment #</th> </tr> </thead> <tbody> <tr> <td>A. Heat Affected or Eroded Seal or Retainer?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">1</td> </tr> <tr> <td>B. Seal or Retainer Damage/Defects?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">1</td> </tr> <tr> <td>C. Corrosion?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> </tr> </tbody> </table>				Yes	No	Comment #	A. Heat Affected or Eroded Seal or Retainer?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	B. Seal or Retainer Damage/Defects?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	C. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Yes	No	Comment #															
A. Heat Affected or Eroded Seal or Retainer?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1															
B. Seal or Retainer Damage/Defects?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1															
C. Corrosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
<p>Notes / Comments</p> <p>Special Issues 3.2.3.1 - No metal damage or rounded chamfers observed on bolt through hole spotfaces. Typical rubber damage on Pw/R.</p> <p>1- Typical disassembly damage to 71 of 72 Packing with Retainer elastomers. (Rubber element)</p> <p>- Thirty five of 72 Packing with Retainers had several radial scratches with raised metal and gouges in the rubber element that exceeds STW3-3780. The scratches and gouges appear to have been caused during bolt removal and/or Packing with Retainer removal from the fixed housing. (Possibility of tool used to pry Packing with Retainers out of bolt hole counter-bore causing damage). Squawk written preliminary PFAR written.</p>																		
<p>Preliminary PFAR(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Preliminary PFAR Number(s): 46C-03</p> <p>Clarification Form(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Clarification Form Page No. (s):</p>																		

POSTFLIGHT OBSERVATION RECORD (PFOR) B-9
Case Factory Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 3-1-93
Assessment Engineer(s)/Inspector(s): G. Rictl		
Factory Joint: Aft Center		
Case Factory Joint Observations:		
	Yes	No
A. Heat Affected or Eroded Joint O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heavy Corrosion in Joint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Heavy Corrosion in Leak Check Port?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Note: Heavy corrosion is defined as corrosion that causes pitting. It may be necessary to remove corrosion to determine if pitting has occurred; however, care should be taken not to damage the hardware. A cloth dampened with solvent or green Scotch-Brite® pads may be used to remove the corrosion. Corrosion removal is to be done in a circumferential direction only.</p>		
Notes / Comments Special Issues 3.2.1.1		

Preliminary PFAR(s)? ☐ Yes ☒ No

Preliminary PFAR Number(s): _____

Clarification Form(s)? ☐ Yes ☒ No

Clarification Form Page No. (s): _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-9
Case Factory Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 12-2-77
Assessment Engineer(s)/Inspector(s): WADE CARTON		
Factory Joint: ET Attach/Stiffener		
<u>Case Factory Joint Observations:</u>	Yes	No
A. Heat Affected or Eroded Joint O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heavy Corrosion In Joint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Heavy Corrosion In Leak Check Port?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Note: Heavy corrosion is defined as corrosion that causes pitting. It may be necessary to remove corrosion to determine if pitting has occurred; however, care should be taken not to damage the hardware. A cloth dampened with solvent or green Scotch-Brite® pads may be used to remove the corrosion. Corrosion removal is to be done in a circumferential direction only.		

Notes / Comments

Special Issues 3.2.1.1

NO FRETTING NOTED

Preliminary PFAR(s)? ☐ Yes ☒ No

Preliminary PFAR Number(s): N/A

Clarification Form(s)? ☐ Yes ☒ No

Clarification Form Page No.(s): N/A

REVISION _____

POSTFLIGHT OBSERVATION RECORD (PFOR) B-9
Case Factory Joint Condition

Motor No.: 360T025	Side: Right (B)	Date: 12-2-92
Assessment Engineer(s)/Inspector(s): WADE CARDON		
Factory Joint: Stiffener/Stiffener		
Case Factory Joint Observations:		
	Yes	No
A. Heat Affected or Eroded Joint O-ring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Heavy Corrosion In Joint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C. Heavy Corrosion In Leak Check Port?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Note: Heavy corrosion is defined as corrosion that causes pitting. It may be necessary to remove corrosion to determine if pitting has occurred; however, care should be taken not to damage the hardware. A cloth dampened with solvent or green Scotch-Brite® pads may be used to remove the corrosion. Corrosion removal is to be done in a circumferential direction only.</p>		
Notes / Comments		
Special Issues 3.2.1.1		
NO FRETTING NOTED.		
Preliminary PFAR(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Preliminary PFAR Number(s): N/A		
Clarification Form(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Clarification Form Page No.(s): N/A		

